Soviet Contributions to Malacology in 1977

BY

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INTRODUCTION

Once again we offer a translation and commentary on the recent Soviet literature in malacology which was mostly published in the year 1977 and abstracted in the Referativnyy Zhurnal. This annual contribution to the community of interested readers (see The Veliger 20 (4): 390 - 398; 19 (4): 440, for last year's listing and for references to earlier resumés, respectively) will hopefully continue to be useful. With few exceptions, we have followed the editors of the Referativnyy Zhurnal in their arrangement of categories.

Since specialists can proceed directly to items of particular interest in special taxonomic categories, we have constricted these introductory remarks to more general topics and to the citations of more or less important papers in which new taxa, new revisions or little known areas are covered.

The diversity of problems to which Soviet workers addressed themselves in 1977 (and 1976 for a few items) is as great as ever, though there is a noticeable reduction in topics related to commercial utilization of molluscan species and their otherwise applied usefulness. Also, for example, few papers deal with mollusks as vectors in parasitic diseases.

Of greatest importance to non-Soviet students are several works which propose more or less far reaching changes in the higher ranks of molluscan taxonomy and systematics. Such are papers by Shileiko on Docoglossa, Chistikov on Scaphopoda, Starobogatov on marine pulmonates, Scarlato and Starobogatov on Polyplacophora—a complete revision with 1 new order and 2 new suborders—and Shileiko on the Pulmonata. The last is a very important paper which has been expanded elsewhere and which casts doubt on the prevailing urethra-centered classification of the Stylommatophora.

Novelties of lower rank were not neglected. Such were introduced by Sirenko (*Lepidopleurus*), Izzatullaev (*Valvata*), Minichev (*Cylichna*—plus a new subgenus *Cyclinoides*), Minichev (*Pneumodermopsis*), Lus (northern buccinids), and Moskalev (Cocculinidae with 6 new monotypic genera).

Zoogeographical data from previously unknown or little known regions are also provided: Pirogov (Volga Delta), Gundrizer and Ivanova (Tuva), Boev (Bashkiria), Starobogatov and Budnimova (Chukotsk Peninsula), Guseva (Irkutsk), Iogansen, Mukhitdinov (south central Siberia), Izzatullaev, Mukhitdinov (Tadjikistan), Dolgin *et al.* (subarctic Siberia), Likharev, Damyanov *et al.* (Bulgaria), Guntya (Dniester), Akramovski (Armenia), Rodionov *et al.* (Seliger Lake), Cheremnov (Khahasia), and Reznik (Kuma River).

Problems in molluscan evolution are treated by Barskov, Shimansky, Nesis (cephalopods), and Neifakh (*Lymnaea stagnalis*). Data on the evolution of the molluscan nervous system are provided by Minichev, and Starobogatov discusses the evolution of cephalopod tentacular apparatus.

Interesting biological data on *Turtonia minuta* and *Hiatella arctica* are discussed by Matveeva and Maksimovich, on the genus *Spinula* (Malletiidae) by Filatova, and on the hydrobiid *Semisalsa dalmatica* by Chukchin.

The following list explains abbreviations and acronyms used in this résumé:

AN – Akademiya nauk (Academy of Science)
Biol. Morya – Biologiya Morya (Marine Biology)
DVBPI – Trudy Biologo-Pochvennyi In-ta. Dal'nevostochnyi Nauchnyi Tsentr, AN SSSR (Proceedings of the Soil Institute of the Far Eastern Scientific Center of the AN USSR), Vladivostok
Dokl. Akad. Nauk SSSR (Reports from the Academy of Science of the USSSR)
EEMB – Eksperim. Ekologiya mor. bezpozvonochnikh (Experimental study, ecology and morphology of invertebrates), Vladivostok
ES – English summary
IFML – Issled. fauny morei, Leningrad, Nauka (Studies of marine fauna, Leningrad Science Press)
MN – Mollyuski, ikh sistema, evolutsiya i rol' v prirode. Nauka. (Mollusks, their systematics, evolution and significance in nature. Science Press), Leningrad
SPZM – Sovrem. probl. zool. i soversh. metodiki yeye prepodavaniya v vuse i shkole, perm' (Contemporary problems of zoology and the improvement of teaching in institutions and schools)
TRO – Trudy Instituta Okeanologii. Akademiya Nauk SSSR. (Transactions of the Institute of Oceanology, Academy of Science, USSR)
VINITI – Vsesoyuznyi Institut Nauchnoi i Tekhnicheskoi Informatsii (All Union Institute of Scientific and Technical Information), AN, SSSR
VPS – Vopr. paleontol. i stratigr. (Problems of paleontology and stratigraphy), Azerbaidzhan

ZOB – Zhur. Obshch. Biol. (Journal of General Biology)
ZZ – Zoologicheskii Zhurnal (Zoological Journal)

We thank Mrs. Mary Jo Dent for her careful typing of the manuscript.

GENERAL

Akramovsky, N. N.
1976. The molluscan fauna of the Armenian Socialist Soviet Republic. Erevan, AN ArmSSSR, 287 pp.; illust.

[In this popular text, 155 species are listed and described]

Ali-Zade, Ak. A. & S. A. Aliev
1976. On the problem of the biogeochemistry of Pontian mollusks. VPS, Vyp. I, pp. 50 - 56

[40 species of 12 genera were studied for contents of calcium, magnesium, manganese, iron, aluminum, silicon, titanium, copper, strontium, barium and nickel. Even insignificant environment changes promote the formation of various structural peculiarities in the shell]

Boef, V. G.
1975. On the freshwater molluscan fauna of Bashkiria. Uch. zapiski (educational notes), Bashkir Univ. Vyp. 76: 25 - 32

[25 gastropod species and 12 bivalve species, of which 5 were cited for the first time, were found in 7 regions of Bashkiria. 32 species were found in the Volga Basin and 28 in the Ural River Basin]

Cheremnov, A. D.
1976. On the ecology of the freshwater mollusks of Khakasia. SPZM, pp. 33 - 34

[A list of the freshwater bivalves and gastropods of the left bank of the Yenisei River is accompanied by ecological notes]

Dolgin, V. N., B. G. Ioganzen, E. A. Novikov & Ya. I. Starobogatov
1976. The freshwater mollusks of subarctic Siberia. Biol. osnovy ryb. kh-va resp. Srednei Azii i Kazakhstana (Basic biology of the fishing industry in the republics of Central Asia and Kazakstan), Dushanbe, pp. 69 - 71

Gontya, F. A.
1975. Some results of the studies of mollusks from the Dniester Basin. MN, Sb. 5, pp. 60 - 62

[78 species of bivalves and gastropods in 36 genera and 15 families are noted]

Gundrizer, A. N., M. A. Ivanovna & E. A. Novikov
1977. The freshwater mollusks of Tuva. Trudy NII biol. i biofiz. pri Tomsk Univ. 8: 60 - 63

[59 species and subspecies (6 prosobranchs, 21 pulmonates and the remaining bivalves) constitute this fauna which bears a mixed Palearctic appearance. 26 Palearctic, 20 East Siberian, 10 European-Siberian and 3 Siberian taxa characterized the Yenisei Basin in Tuva. Also some Holarctic, western Mongolian and Sino-Indian species are present. The fauna of Ubsanura and Kobdo was less intensely studied]

Il'ina, L. B., L. A. Nevesskaya & N. P. Paramonova
1975. Regulation of molluscan evolution in isolated and partially isolated bodies of water in the Late Miocene and Early Pliocene of Eurasia. MN, Sb. 5, pp. 188 - 190

[Certain trends are noteworthy in such bodies of water: 1) a very small number of families is present in comparison to the relatively large number of families and genera which constitute the source fauna in nearby, open marine basins; 2) a great increase in the number of species and their populations, especially endemics; 3) the predominance of representatives of euryhaline marine families; 4) the presence of brackish water forms; 5) the subdivisions of trophic regimes and the narrowing of niches. (The subject expressedly relates to the radiation of cardiids in the Ponto-Caspian Basin during the late Tertiary)]

Ioganzen, B. G. & V. N. Dolgin
1976. The freshwater mollusks of northwestern Siberia and their qualitative development. Vopr. biol. i agronomii (Problems in biology and agronomy), Tomsk, pp. 67 - 77

[65 gastropod and bivalve mollusks are known from the various reservoirs in this distinct biota]

Ioganzen, B. G., E. A. Novikov & A. D. Cheremnov
1976. Freshwater mollusks of south central Siberia. Probl. ekologiya, Tomsk, 4: 125 - 136 (ES)

[In this survey, 38 species of gastropods and 43 species of bivalves were treated]

Izatullaev, Z. B.
1976. On the freshwater molluscan fauna of northern Tadjikistan. Biol. osnovy ryb. kh-va. resp. Srednei Azii i Kazakhstana (Basic biology of the fishing industry in the republics of Central Asia and Kazakstan), Dushanbe, pp. 83 - 84

Izzatullaev, Z.
1977. New and little known freshwater mollusks of Central Asia. ZZ 56 (6): 948 - 950 (ES)

[*Valvata (Cincinna) gafurovi* is described as new from mountain lakes (Sulukty-Sai) in the East Pamirs of the Gorno-Badakhshanskaya Autonomous Republic, Tadjikistan. Also *Sphaerium corneum* and *Musculium creplini* were found in the East Pamirs]

Kokochashvili, G. V.
1976. Materials for a dictionary of Russian-Georgian conchological terms. Tbilisi, 80 pp.

Minichev, Yu. S.
1975. The origin of the molluscan nervous apparatus. MN, Sb. 5, pp. 15 - 18

Pozdnyakova, L. A.
1976. On the possibility of complex estimates of the determination of calcium and magnesium contents in molluscan shells in connection with paleo-temperature analysis. EEMB, pp. 140 - 142

Sadykhova, I. A.
1976. Shell marking in the study of mollusks. EEMB, pp. 154 - 155

[A survey of modern methods with a list of mainly English language papers]

Voloshina, M. I.
1977. Terrestrial mollusks from the upper quarter of the Central Priputya [Formation] of the basin of the Chugur River. Faunal and floral complexes in the cenozoic of the Pre-Black Sea. Kishinev, Shtiintsa, pp. 57 - 61

[This is the first account of the land and freshwater mollusks of the late Anthropogenetic of the region. An attempt is made to clarify the topographic-climatic conditions of ancient Moldavia]

YAROSLAVTSEVA, L. M.

1976. A study of the adaptation to the freshening of water in several species of littoral and estuarine marine mollusks. EEMB pp. 189 - 190

ZOLOTAREV, V. N.

1976. Perspectives in the study of the growth rates and ages of mollusks. EEMB, pp. 81 - 84

[The oldest specimen of the Far Eastern mussel, *Crenomytilus grayanus,* was calculated to be 104 years. Other species of bivalves were listed from 22 to 61 years. Analysis of the chemical contents of the shell offers better results in determining age]

POLYPLACOPHORA

SIRENKO, B. I.

1977. The vertical distribution of the chiton genus *Lepidopleurus* (Lepidopleuridae) and a new ultraabyssal species. ZZ 56 (7): 1107 - 1110 (ES)

[Known from the Carboniferous, *Lepidopleurus* is the most ancient of Recent chiton genera. It is characterized by a series of archaic features such as the weak development of the articulamentum, absence of insertion plates, narrow apophoses, and narrow muscular bands around the shell. Present in all seas except those with low salinity, *Lepidopleurus* is found mainly in the boreal regions, from the shallow zone to great depths. *Lepidozona vityazi* is described from the Bugenvilsky Trench at 6920 - 7657 m and constitutes the most abyssal of known chitons]

STAROBOGATOV, YA. I. & B. I. SIRENKO

1975. On the systematics of the Polyplacophora. MN, Sb. 5, pp. 21 - 23

[The following classification is proposed: Subclass Paleoloricata with Order Chelodida, Suborder Chelodina (2 families) and Suborder Septemchitonina (1 family); Subclass Neoloricata with Order Scanochitonida, new (1 family), Order Lepidopleurida, Suborder Lepidopleurina (3 families), Suborder Choriplacina, new (2 families), Order Chitonida, Suborder Tonicellina, new (6 families), Suborder Acanthochitonina (2 families) and Suborder Chitonina (4 families)]

GASTROPODA, GENERAL

DAMYANOV, SERAFIM G. & ILYA M. KOKHAREV

1975. The fauna of Bulgaria. 4. Land gastropods. Sofia, Bulgarian Acad. Sci., 425 pp.; illust.

[Included are 214 species and subspecies: 4 species in 2 families of prosobranchs, 3 species of one family of basommatophoran pulmonates, and 24 families of stylommatophorans. A thorough and varied introduction discusses numerous phases of the biology, physiology and ecology of these mollusks]

MINICHEV, YU. S. & YA. I. STAROBOGATOV

1975. On the systematics of the Euthyneura. MN, Sb. 5, pp. 8 - 11

[Four groups exist in the Euthyneura: 1) the Siphonariidae, which are possibly not related to primitive hyperstrophic forms; 2) the Pulmonata; 3) the typical opisthobranchs; and 4) the aberrant opisthobranchs. The latter 3 groups are phylogenetically related to primitive hyperstrophic forms. The independent origin of these 4 groups from primitive Diotocardia is demonstrated and it is suggested that each group should be regarded as a subclass]

NAIDENKO, V. P. & T. KH. NAIDENKO

1976. Thermal stimulation of spawning and cultivation of larvae of two species of gastropods in aquaria. EEMB, pp. 125 - 126

[*Tectonatica janthostoma* and *Aeolis* sp. were induced to lay eggs; features of their reproductive biology are discussed]

PETRUNYANKA, V. V.

1977. The distribution of carotenoids and myoglobin in the tissues of pulmonates. Zh. evolyuts. biokhimii i fiziol. 13 (2): 218 - 220 (ES)

[Tissue extracts of *Helix pomatia, Lymnaea stagnalis,* and *Planorbarius corneus* were studied spectrophotometrically]

SHILEIKO, A. A.

1975. Peculiarities of the excretory system of the pulmonates in connection with their subclass classification. MN, Sb. 5, pp. 12 - 15

[The structure of the kidneys is at present used as the major taxobasis for the classification of the Pulmonata. It is demonstrated that the sigmurethrous condition, in one form or another, appears in all terrestrial pulmonates, even in the Orthurethra. However, in that group, the distal portion of the kidney displays a tendency to be shorter. The heterurethrous condition is the first result of shell reduction in all groups where this reduction takes place. For these reasons the taxonomic distinction of larger groups on the basis of the kidneys is not feasible]

SIBER, L. S. & L. I. PSHENICHNIKOVA

1976. Melanistic pigmentation of some freshwater and terrestrial gastropods and its significance. Vopr. biol. i agronomii (Problems in biology and agronomy), Tomsk, pp. 100 - 106

[In aquatic pulmonates, aquatic prosobranchs and land pulmonates the pigmentation is without taxonomic significance, but, in some cases, may serve a thermo-regulatory function]

STAROBOGATOV, YA. I.

1977. Class Gastropoda [in] Opredelitel' presnovod. bespozvonochnykh Evrop. chasti SSSR (Handbook of freshwater invertebrates of the European portions of the USSR). Plankton and Benthos. Gidrometeoizdat, Leningrad, pp. 152 - 174

[58 species in 13 families of gastropods are considered; brief ecological notes, distributional data, and synonymies are provided]

STAROBOGATOV, YA. I. & L. L. BUDNIKOVA

1976. On the freshwater gastropod fauna of the extreme northeastern USSR. DVBPI 36 (139): 72 - 88

[In total, 20 species are considered, 15 from the Chukotsk Peninsula; 4 species are common to America and the Chukotsk, 1 from northwestern America new to the USSR. 2 new species and 1 new subspecies are described]

YEVDONIN, L. A. & YU. S. MINICHEV

1975. Adaptations of pelagic mollusks. MN, Sb. 5, pp. 24 - 26

[The basic adaptive change involved the organs of locomotion, and alterations of other structures are correlated with it]

PROSOBRANCHIA

CHUKHCHIN, V. D.

1976. The functional morphology of *Semisalsa dalmatica*, a gastropod new to the Black Sea. ZZ 55(11): 1627 - 1634

[*Semisalsa dalmatica* resembles the Hydrobiidae but differs in the morphology of its reproductive system. Unlike the hydrobiids, the pallial oviduct is a simple slit and does not have longitudinal folds separating it from the vaginal canal. The renal oviduct has 2 light [colored] loops and lacks the dark pigmented spiral of hydrobiids. A channel connects the oviduct with the mantle cavity. The male reproductive system also differs from that of the hydrobiids. Structurally, *Semisalsa* is a rissoid but not assignable to any known family. Although the female genital anatomy indicates a relationship with the Cingulopsidae, the male system differs decidedly. It is suggested that a separate family may have to be erected]

GALKIN, YU. I.

1976. The distribution of Trochidae in the Barents Sea with contemporary changes of climate. Donnaya fauna Kraev. moryei SSSR (Benthic fauna of the regional seas of the USSR), pp. 61 - 77 (ES)

[Encompassing data from 1838-1973, there were changes in the Trochidae which corresponded with temperature variations. During the 1920's and 1930's, a warming of water drove the arctic species northward and allowed an increase in boreal species. A reversal of this process occurred during the period of chilling in the 1960's]

GONCHAROV, A. D.

1977. *Rapana* at the northwestern shore of the Black Sea. Gidrobiol. zh. 13 (3): 29 - 31

[Data are provided on the distribution, density, composition and distribution at various depths and substrates. A morphologically distinguishable form, *Rapana thomasiana thomasiana odessanus*, is established]

GORYACHEV, V. N.

1977. New data on the morphology and distribution of *Neptunea laticosta* Golikov (Gastropoda, Buccinidae). ZZ 56 (4): 631 - 633 (ES)

[The egg capsule and the structure of the distal portion of the penis are described. The species is cited for the first time from the Bering Sea in the presence of the subspecies, *N. laticosta ochotensis*]

KARABEILI, O. Z.

1977. The distribution of the species of *Abeskunus* in the central and southern Caspian. VINITI, Manuscript dept., No. 1959-77

[From 321 stations, more than 150 000 specimens of *Abeskunus* Kolesnikov, a subgenus of *Pseudamnicola*, were taken. Geographical, ecological, and bathymetrical data are provided for 3 species: *A. brusinianus* (Clessin & Dybowski) occurs from shallow depths to 210 m in all the central and southern Caspian; *A. sphaerion* (Mousson) is found mainly in the southern Caspian to depths of 50 m; and *A. depressispira* (Logvinenko & Starobogatov) is stenotopic in the southern Caspian to 100 m]

KARABEILI, O. Z. & B. M. LOGVINENKO

1977. The distribution of the gastropods of the section of *Trachycaspia* of the genus *Turriscaspia* in the central and southern Caspian Sea VINITI, Manuscript dept., No. 559-77

[Three species of *Trachycaspia* are now known. The most widely distributed and abundant species, *T. dimidiata* Eichwald, is found mostly in the central part of the sea although a few occur to the south in the Apsherenki Rapids and occupy widely differing substrates, mainly between 10 - 250 m. *T. bakuana* Kolesnikov, endemic in the southeastern Caspian, lives to 100 m in substrates different from the other species. *T. laticarinata* Logvinenko & Starobogatov. endemic in the southwestern Caspian to depths of 160 m, has narrow ecological tolerances and a restricted geographic range. All these species have patchy distributions within their ranges, a situation possibly correlated with the absence of a swimming larva]

KONDRATENKOV, A. P.

1976. Potential tolerance to salinity in populations of *Hydrobia* from the White Sea. EEMB, 87 - 89

[After acclimatization to an initial salinity of 20 parts per 1000, the euryhalinity of the mollusks increased an average of 4.5 times. The potential tolerance of various populations differs strongly and increases from the open sea toward estuaries]

LUS, V. YA

1976. New and rare deepsea buccinid species from the Kurilo-Kamchatka and Japanese Trenches. TRO 99: 71 - 84 (ES)

[*Buccinum lamelliferum* is described as new from the Kuril-Kamchatka Trench. Additional data on abyssal and bathyal species, *B. diplodetum* Dall, 1907 and *B. kashimanum* Okutani, 1964, are provided. The shell, operculum, radula and anatomy of each species are discussed]

MATVEEVA, T. A.

1977. The reproductive ecology of several species of gastropods in the upper shelf of the Sea of Japan Shelf (Pos'eta Bay). 1. S'ezd sov. okeanologov, vyp. 2, tezisy dokl., Moscow, "Nauka," (First session of soviet oceanologists, 2. thesis reports), pp. 24 - 25

[The following types of larval development were observed:

1) Pelagic

a) the veliger develops from a free swimming trochophore: (*Collisella radiata, C. heroldi*);

b) the veliger develops in a planktonic egg capsule (*Littorina brevicula, L. squalina, Tegula rustica*);

c) the veliger develops inside the deposited egg-case which is fastened to a firm substrate (*Epheria turrita, Thapsiella plicosa, Tectonatica janthostoma, Boreotrophon candelabrum, Mitrella burchardi, Nucella heysiana, Tritia* sp.);

2) Direct development – the veliger develops in the deposited egg which is fastened to the substrate (*Littorina kurila, Falsicingula mundana, Euspira pila, Tritonalis japonica, Tritia acutidentata, Homalopoma sangarense*).

Larvae appear in the plankton at the end of March at a water temperature of –0.7°C and a relative scarcity of phytoplankton. In May, the number of larvae increases considerably and reaches the maximum in June. In the following months the numbers decrease gradually and in October only isolated individuals are seen in the plankton. The settling of the larvae and the appearance of young in most species takes place from July to September. This later phase of reproduction is limited by rather narrow temperature limits (18 - 21°)]

MOSKALEV, L. I.

1976. On the generic classification of the Cocculinidae (Gastropoda; Prosobranchia). TRO 90: 59 - 70 (ES)

[6 new genera and their type-species are described: *Fedikovella (F. caymanensis), Teuthirostia (T. cancellata), Kurilabyssia (K. squamosa), Caymanabyssia (C. spina), Bandabyssia (B. costoconcentrica),* and *Tentaoculus (T. perlucida).* 69 species and 2 genera previously described are listed]

Pakhomov, A. N.

1976. An analysis of deviation and regulation of the distribution of isozymes in *Littorina littorea* during the adaptation to salinity fluctuations. EEMB, pp. 137 - 138

Poberezhnyi, E. S. & T. Ya. Sitnikova

1976. A report on the number of chromosomes of the Lake Baical species *Benedictia baicalensis* Gerstf. (Gastropoda, Prosobranchia). Novy materialy po faunye *i* flore Baikala, Irkutsk, pp. 142 - 144

[2N = 34 with 17 bivalents at metaphase]

Shileiko, A. A.

1977. The symmetry of the Docoglossa and the problem of the origin of the order. Byul. Mosk. O-va ispyt. prirody Otd. Biol. (Bulletin of the Moscow Naturalist's Society, Biology Series) 81 (3): 60 - 65 (ES)

[The representatives of the Docoglossa have neither a turbospiral form nor stage in their ontogenesis. The asymmetry of the mantle cavity is therefore not related to a former turbospiral stage but to the adaptation of the respiratory system to aquatic currents; these adaptations include the disappearance of the right ctenidium and the concomitant restructuring of internal organization. Thus, the symmetry of the Docoglossa is a primitive feature and the shell is initially exogastric. Earlier endogastric ancestors might well have been the Cambrian Helcionellidae]

Sirenko, B. I. & V. L. Kas'yanov

1976. The abalones of Monneron Island (Sea of Japan). Biol. Morya, No. 6, pp. 20 - 25 (ES)

[The authors claim that the presence of *Haliotis kamtschatkana* in the seas of the USSR is based on erroneous 19th century labels. The northernmost Soviet population of *Haliotis discus* occurs on Monneron Island and some biological details of this population are provided]

Tsikhon-Lukanina, E. A.

1976. The feeding of the gastropod *Gibbula divaricata* in the littoral zone of the Black Sea. EEMB, pp. 186 - 188

[A study of the energy flow in colonies of *G. divaricata* which feed on periphyton and detritus]

Vilenkin, B. Ya. & M. N. Vilenkina

1977. Response of individuals of White Sea populations of *Littorina obtusata* and *L. littorea* to temperature changes. ZZ 56 (6): 829 - 834 (ES)

[Individuals of the 2 species of snails were placed into artificially controlled temperature regimes and showed differences in preferences. Homing was clearly observed in *L. littorea* but less so in *L. obtusata,* a phenomenon which apparently correlates with the pelagic larva of the former and the direct development from the egg of the latter. Being panmictic, *L. littorea* apparently is characterized by a more greatly developed system of acclimatizations]

OPISTHOBRANCHIA

Minichev, Yu. S.

1976. On the morphology of the pelagic mollusks of the family Pneumodermatidae (Opisthobranchia, Gymnosomata) in Antarctic waters. IFML 18 (26): 102 - 106 (ES)

[A discussion of the characteristics of the Pneumodermatidae is provided and *Platybrachium antarcticum* (a new genus and new species) and *Pneumodermopsis brachialis* (a new species) are described]

1977. On the morphology and systematics of the genus *Cylichna* (Gastropoda; Opisthobranchia) from Franz-Josef Land. IFML 14 (22): 428 - 434 (ES)

[*Cylichna occulta* (Mighels), *C. alba* (Brown), and *C. arctica* (a new species) are described. A new subgenus *Cylichnoides* is erected on the basis of shell structure and reproductive morphology with *C. occulta* as type species. The subgenus possesses a different copulatory apparatus and a lamellar larval shell. The peculiarities of heterostrophy are noted for several species]

TERRESTRIAL PULMONATA

Akramovski, N. N. & G. S. Babayan

1976. Methods in controlling the mountain snail *(Vitrinoides monticola armenica)* against attacking hothouse tobacco in Armenia. Tekhekagir gyukhatntesakan gitutyunner, Izv. s.-kh. Nauk, No. 10, pp. 68 - 72 (Armenian with Russian summary)

[The snail is nocturnal in its habits; chemicals and their applications against these pests are discussed]

Burenkov, M. S.

1977. The growth structure of populations of 3 species of snails Stylommatophora, Pulmonata). ZOB 38 (2): 296 - 304 (ES)

[Populations of *Agriolimax reticulatus, A. laevis* and *Arion circumstrictus* were studied in different biotopes; the number of generations per annum is correlated with climate, being least in the most rigorous conditions and most in the more equitable]

Dmitrieva, E. F. & Ya. S. Shapiro

1976. Physiological and toxicological aspects in the postembryogenesis of the reticulated slug *(Agriolimax reticulatus).* Nauchnye trudy Leningrads. s.-kh. in-ta. 297: 91 - 94

Gorokhov, V. V., A. A. Shileiko & R. Ya. Butylin

1975. On the terrestrial molluscan fauna as intermediate host of protostrongilids in southern Kirgizia. Tr. vses. in-ta helmintol (Transactions of the All Union Institute of Helminthology) 22: 43 - 51 (ES)

[52 species are found in the pasturelands. 3 epidemiological situations are recognized: 1) a dangerous zone in the spring, fall and winter pasturelands at 1000-2000 m above sea level where, basically, invading animals with protostrongilids originate; 2) a potentially dangerous zone in summer pasture lands at 2000-3000 m where sheep with protostrongilids appear to a lesser degree; 3) on summer

pasture land at 3000 m and higher where sheep infected with protostrongilids do not appear]

KHOKHUTKIN, I. M.

1976. Polymorphism as a method in determining populational areas of land mollusks. SPZM, pp. 153 - 154

[The polymorphic structure may serve as a criterion for the continuity of distributional areas of a species]

KHOKHUTIN, I. M. & A. I. LAZAREVA

1975. Polymorphism in populations of some Caucasian land mollusks. Mn, Sb. 5, pp. 32 - 34

[The banding structure of populations of *Fructicocampylaea narzanensis, Xeropicta krynickii,* and *Caucasotachea atrolabiata* was studied. It was shown that, unlike dimorphic populations of *Bradybaena,* the polymorphism of the populations studied is phenotypic in nature]

LIKHAREV, I. M.

1975. The zoogeographic characteristics of the land molluscan fauna of Bulgaria and its origin. MN, Sb. 5, pp. 26 - 29

[There are 9 zoogeographical groups: 1) widely distributed, boreal species (23); 2) general European species (34); 3) Euxine species (18); 4) Atlantic-Mediterranean species (7); 5) Southern European mountain species (10); 6) Central European mountain species (26); 7) endemic Balkan species and subspecies (50); 8) xerophilic species of Near-Eastern origin (16); and 9) xerophilic species of Mediterranean origin (13). In the fauna of the Balkan Province, almost half of the 550 species are endemic]

MUKHITDINOV, A. B.

1975. Zoogeographical analysis of the land mollusks of North Tajikistan. MN, Sb. 5, pp. 29 - 31

[Of the 63 species (26 genera and 13 families), 3 zoogeographical groups can be recognized: 1) widely distributed boreal species (10); 2) Europo-Asiatic mountain species (7); 3) endemic northern Asian species (41)]

NIKOLAEV, V. A.

1976. On the ecology and distribution of helicoids in the heights of central Russia. SPZM, pp. 109 - 111

[7 species of helicoids are known from there in the families Hydromiidae and Helicidae. Short remarks on their distribution and ecology are included]

OMAROV, ZH. K. & A. F. IVAN'KOVA

1976. Double diffusion reaction in starch-gel immunochemical analysis of the polymorphic species *Bradybaena plectotropis.* KazSSR Fylum Akad. Khabalary, Izv. AN KazSSR, Ser. Biol. 4: 18 -24 (Kazakh summary)

[Antigenic studies confirm the large degree of polymorphism of *B. plectotropis* in comparison to *B. lantzi*]

PAKHORUKOVA, L. V. & P. V. MATEKIN

1977. Interspecific distinctions in the influence of temperature on the duration of embryonic development in slugs. ZOB 38 (1): 116 - 122 (ES)

[A comparison of geographically separate populations of *Agriolimax agrestis* and *A. reticulatus* showed decided differences in the influence of temperature on the length of embryogenesis]

PIROGOV, V. V.

1977. The terrestrial pulmonate fauna of the Volga Delta. ZZ 56 (8): 1248 - 1250 (ES)

[7 species of stylommatophorans were taken, of which *Succinea elegans* (Risso), *Pseudotrichia rubiginosa* (A. Schmidt) and *Zonitoides nitidus* (Müller) were most numerous, sometimes occurring in densities of 2500/m². Spring floods control the densities and effect dispersal]

REZNIK, Z. V.

1976. Faunistic characteristics of land mollusks in the flood plain forests of the Kuma River. SPZM, pp. 131 - 133

[There is a decline in the number of species in forests along the Kuma from the border of Georgievska to the village of Vladimirovka]

SHAPIRO, YA. S.

1976. Harmful slugs. Zashchita rastenii (The Protection of Plants), No. 9, pp. 28 - 30

[Data on the external structure and the biology of the most common species in the USSR are provided]

SHIKOV, E. V.

1976. On the dispersal of land mollusks during flood times. ZZ 56 (3): 361 - 367 (ES)

[28 species of slugs and snails, constituting 57% of the malacofauna of the Kalinin region are transported by flood waters. The extent of this dissemination depends on the geomorphology of the terrain and on the nature of the animals]

SOKOLOV, V. A. & V. A. KOVALEV

1977. The electrical activity of the cerebral ganglia of *Helix vulgaris* during statocyst stimulation. Zh. evolyuts. biokhimi i fiziol. 13 (4): 512 - 513 (ES)

[Testing was conducted at 30, 60, 150, 300, 500, and 1000 Hertz. Since at frequencies of 2000 and 5000 there was no response, the threshold frequencies were established at a low of 30 and a high of 1000. 3 - 4 stimulations at one frequency at intervals from 1 - 2 minutes brought about a reduction and finally a disappearance of a response. Transference to another frequency occasioned renewal of the response. The neuronal cells associated with the statocyst stimulate a response in the cerebral ganglia]

PULMONATA, AQUATIC

ARUTYUNOVA, L. D.

1977. Aphallia in a population of *Radix* (Gastropoda, Lymnaeidae) from Armenia. Biol. Zhur. Armenii 30 (3): 89 - 90 (Armenian summary)

[50% of a population of *Radix auricularia* in the plain of Ararat was found to be aphallic. The mollusks were not infected, and the condition was not due to parasitical castration]

GUSEVA, M. I.

1976. On the general problem of the pasture malacofauna in the Irkutsk region. Trudy Irkutskoi Nauchno-issledovantel'skoi Veterinarnoi Opytnoi Stantsii (Works of the Irkutsk Experimental Station for Veterinary Studies), Vyp. 3, pp. 280 - 282

[8 species in 3 families of freshwater pulmonates were found in 20 pastoral areas]

KRUGLOV, N. D.

1976. Perspectives on the utilization of an experimental method of hybridization in the systematics of the lymnaeids. SPZM, pp. 78 - 79

[General observations on the functions of portions of the reproductive tract in *Lymnaea corviformis*]

Levina, O. V.

1975. Seasonal dynamics of size-age structure in some lymnaeid populations. MN, Sb. 5, pp. 86 - 88

[In the Kiev Reservoir in 1971, the maximum growth in populations of *Lymnaea stagnalis* and *L. ovata* occurred in August]

Masaronovski, A. G. & M. I. Guseva

1976. On the features of the biotopes of small pond snails in the pasture areas of the Irkutsk region. Trudy Irkutskoi Nauchno-issledovantel'skoi Veterinarnoi Opytnoi Stantsii (Works of the Irkutsk Experimental Station for Veterinary Studies), Vyp. 3, pp. 277 - 279

[Natural conditions favor fewer lymnaeids and thus decrease the incidence of fasciolariasis]

Neifakh, A. A.

1976. On the morphological function of the nucleus in the early development of *Lymnaea stagnalis*. Ontogenez 7 (6): 630 - 633 (ES)

[Experiments are described which utilize the inhibitory effect of actinomycin on the early developmental stages in *Lymnaea*]

Sokolov, V. A. & N. N. Kamardin

1977. Impulse frequency in the osphradial nerve of lymnaeid pond snails under varying osmotic conditions and different concentrations of oxygen. Vestn. Leningrad. Univ. 3: 87 - 90 (ES)

Starobogatov, Ya. I.

1976. On the composition and systematic placement of marine pulmonates. Biol. Morya, No. 4, pp. 7 - 16 (ES)

[Several groups of mollusks which differ phylogenetically are assigned to the primitive pulmonates. These are the orders Ellobiida, Amphibolida, and Trimusculida. In the Ellobiida, 4 superfamilies can be distinguished: 1) Subulitoidea including Subulitidae Lindstrom, 1884 and Soleniceidae Wenz, 1938; 2) Melampodoidea, including Melampodidae Stimpson, 1851 and Otinidae H. & A. Adams, 1855; 3) Carychioidea including Carychiidae Jeffreys, 1829, Pythiidae Odhner, 1925, Anthracopupidae Wenz, 1938, Velainellidae Vasseur, 1880, Zaptichidae Zilch, 1959, Pedipedidae Crosse & Fischer, 1880, and Cassidulidae Odhner, 1925; 4) Ellobioidea with the families Ellobiidae H. & A. Adams, 1885 and Leucophytiidae (a new family). The order Amphibolida contains the families Amphibolidae Gray, 1840 and Salinatoridae Starobogatov, 1970. In the order Trimusculida, there is only the single family Trimusculidae Habe, 1958.

These orders of lower pulmonates, derived from primitive stylommatophorans, can be traced in the degrees of their adaptation to aquatic habitats. The families Onchidiidae and Rhodopidae, customarily included in the Pulmonata have no relationship to that subclass and they should be placed in the subclass Dextobranchia and elevated in rank. In the order Rhodopida, only the family Rhodopidae Thiele, 1931 is included; the order Onchidiida has 3 superfamilies: Onchidelloidea, Onchidioidea, and Hoffmannoloidea. In the Onchidelloidea are included the Onchidellidae E. & E. Marcus, 1960, the Onchidinidae (a new family) and Peroninidae(also a new family); in the Onchidioidea there are the families Onchidiidae Rafinesque, 1815, Peroniidae Labbe, 1934, Platevindecidae (a new family) and Quoyellidae (another new family). Only the single new family Hoffmannolidae represents the Hoffmannoloidea.

Similarly, the Siphonariidae cannot be assigned to the Pulmonata and constitute another subclass, the Divasibranchia with the single order Siphonariida and 2 superfamilies: 1) Siphonarioidea with the families Siphonariidae Gray, 1840, Anisomonidae (a new family), and Siphonacmeidae (another new family); and 2) the Rhytidophiloidea with the single new family Rhytidophilidae. The Siphonariida are distinguished from marine pulmonates which doubtlessly derived from primitive aquatic animals]

Tataryunas, A. B.

1976. Carotinoid content in the brain of *Lymnaea stagnalis* as determined by its physiological state. Obmen i funkstii vitamina A i karotina v organizme cheloveka i zhivotnikh, ikh prakt. ispol'z (Exchange and function of vitamin A and carotin in the human organism and animals, their practical use). Tezisy doklad. II. Vses. konf., Chernovits, pp. 152 - 153

BIVALVIA

Alyakrinskaya, I. O.

1977. On the dissolution of the crystalline style in some bivalves. ZZ 56 (1): 23 - 27 (ES)

[Unfavorable respiratory conditions bring about a striking dissolution of the crystalline style in *Mytilus galloprovincialis* and *Cardium edule; Donax julianae* and *Mya arenaria* were unaffected]

1977. The adaptation of littoral White Sea bivalves to desiccation. ZZ 56 (7): 1110 - 1112 (ES)

[In *Macoma balthica*, calcium compounds in the shell are utilized to buffer the hemolymph while in *Mytilus edulis* the dissolution of the crystalline style takes place]

Dzyuba, S. M. & M. N. Gruzova

1976. Seasonal changes in RNA synthesis and morphology of female gonads in shallow water scallops. Biol. Morya, No. 4, pp. 38 - 44 (ES)

[The sexual cycle of *Patinopecten yessoensis* is divisible into stages including complete sexual inertia where there is no RNA synthesis in gonadal tissue during the winter, an active period of gametogenesis including the growth and maturation of the oocyte and, finally, the act of spawning the oocyte itself]

Filatova, Z. A.

1976. Monograph on the deepsea bivalve genus *Spinula* (Dall, 1908) (Malletiidae) and its distribution in the Pacific Ocean. TRO 99: 219 - 240 (ES)

[10 species, including *S. knudseni* and *S. thorsoni* described as new, are known. The genus occurs in the Pacific, Indian and Atlantic oceans and is notably absent from the Polar Basin and the Antarctic]

Flusova, G. D. & T. I. Bashurova

1976. Polymorphism in the scallop *Patinopecten yessoensis* in the bays of the southern and central maritime province. Vses. konf. molodykh uchenykh nuach.-tekhn. progress v. ryb. promsti (All-union conference of young students in scientific technical progress in the fishing industry), Moscow, pp. 12 - 13

[Populations from 8 bays were studied. A hypothesis is proposed regarding the multiple allelic system for esterase of the digestive diverticula in this species]

Goromosova, S. A. & A. Z. Shapiro

1977. Features of energy exchange of mussels in connection with their ecology. 1. S'ezd sov. okeanologov, vyp. 2, tezisy dokl. Moscow, Nauka (First session of soviet oceanologists, 2, thesis reports), p. 121

[Environmental stresses affect the rate of glycolysis in mussels]

Ignat'ev, A. V. & E. S. Krasnov

1976. Investigation of the effect of temperature on growth increments in the shells of scallops using isotopes of oxygen. Biol. Morya, No. 5, pp. 62 - 78 (ES)

[Measurements of isotopes of oxygen (O^{18}/O^{16}) were employed in studying growth layers in the shells of *Patinopecten yessoensis, Chlamys swifti* and *Ch. farrei nipponensis*. The dynamics of growth were correlated with seasonal parameters, such as temperature]

Ignat'ev, A. V., E. V. Krasnov & I. M. Romanenko

1976. The correlation between the magnesium content of mussel shells, their growth temperatures, mineralogical composition and age. EEMB, pp. 85 - 86

[Positively correlated with a rise in temperature, the magnesium content of growth layers of the shell varies ontogenetically and seasonally. In early years the average magnesium content in calcite in the shells of *Crenomytilus grayanus* is 0.08 to 0.1%; at about 70 years it rises to 0.15%]

Kandyuk, R. P, T. A. Petkevich, I. A. Stepanyuk, T. P. Grobyleva & L. N. Shcherbina

1977. Some biochemical indices of Black Sea mollusks. Gidrobiol. Zh. 13 (1): 97 - 102

[In an analysis of trace elements and amino acids, different chemical compositions were noted in *Mytilus galloprovincialis, Ostrea taurica* and *Mya arenaria* in the northwestern part of the Black Sea]

Kartavtsev, Yu. F. & S. M. Nikiforov

1976. Comparisons of some data on the morphology, physiology, histology, and biochemistry of *Crenomytilus grayanus* (Dunker) in order to determine its taxonomic status more accurately. Biol. Morya, No. 6, pp. 13 - 19 (ES)

[2 sympatric forms of *C. grayanus* were said to occur in Peter the Great Bay. The data examined do not justify the division into 2 independent species despite certain observed conchological differences in shell length and obesity]

Kazakov, V. K.

1977. On insulin-like materials in cells of the intestinal epithelium of *Unio pictorum*. Zh. evolyuts. biokhimi i fiziol. 13 (4): 439 - 442 (ES)

[Mammalian insulin-antisera give an immunological reaction with midgut epithelia cells of *U. pictorum*]

Konovalova, I. V.

1976. Data on the gradual development of early mid-Jurassic *Inoceramus* in southern Sikhoto-Alinia. DVBPI 38 (141): 28 - 33 (ES)

[Morphological changes of the shell and ligamental apparatus were observed and 4 stages were discerned]

Kutishchev, A. A.

1976. Characteristic selectivity by larval *Crenomytilus grayanus* (Dunker) before settling on the substrate. Dokl. AN SSSR 230 (3): 737 - 740

[Larvae actively search for a byssus secreted by mature individuals of the same species, distinguish these byssi from other mytilids and other substrates, and eventually settle. Thus, it is the mature individuals which shelter the young in their byssal network which acts like a 'kindergarden' where the young generation is protected from predators]

Mamed'yarova, G. M.

1976. On the systematics of the family Apscheroniidae Sultanov. VPS, Vyp. I, pp. 134 - 140

[The group has a monophyletic origin, deriving from various species of the genus *Cardium*. The following arrangement is proposed: Superfamily Cardiacea; Family Apscheroniidae; Genera *Parascheronia*, 5 species; *Apscheronia*, 4 species]

Margulis, B. A. & G. P. Pinaev

1977. The differences in the composition and nature of the albumen from the adductor muscles of bivalves. Biol. Morya No. 1, pp. 63 - 72 (ES)

[In 26 species of bivalves, disc-jel electrophoretic analysis of muscle fibers and albumens revealed differences consonant with taxonomic distinctions, especially at the generic and familial levels]

Matveeva, T. A.

1976. The biology of the bivalve *Turtonia minuta* in different parts of its range. Biol. Morya, No. 6, pp. 33 - 39 (ES)

[Data are presented regarding the habitat, depth, population structure, and the time of spawning. Also the systematic placement of this species is examined]

1977. Reproduction in bivalves of the family Astartidae. IF ML 14 (22): 418 - 427 (ES)

[*Tridonta borealis* (Schumacher), *T. montagui* (Hancock), and *Astarte elliptica* (Brown) have a wide distribution in arctic and subarctic waters. They are characterized by a long period of gametogenesis but a short spawning period in autumn and winter. Eggs are large (300 μm), yolky and enveloped by 2 jelly-like membranes which promote swelling and stickiness after fertilization. Growth takes place relatively rapidly. Protandric hermaphrodites, the Astartidae have populations with large-sized females which increase fecundity and reproductive effectiveness]

Matveeva, T. A. & N. V. Maksimovich

1977. Characteristics of the ecology and distribution of *Hiatella arctica* (Heterodonta) in the White Sea. ZZ 56 (2): 199 - 204 (ES)

[Preferring hard substrates, the species is widely distributed and euryhiontic, living mostly in depths between 5 and 10 m, but occasionally to 60 m. It matures sexually at the end of its first year when it reaches a length of about 14 mm. Spawning takes place in June-July and the larvae settle by October. Winter mortality is is highest in young of the year. With shells measuring up to 31 mm in length, the species may live as long as 6 years]

Miloslavskaya, N. M.

1977. Mollusks of the family Thyasiridae (Bivalvia, Lucinoidae [sic] of the Arctic seas of the USSR. IFML 14 (22): 391 - 417 (ES)

[The Arctic Thyasiridae consist of 3 genera and 8 species, one of which *(T. phrygiana)* is described as new. Detailed descriptions, a dichotomous key, ecological comments, and an analysis of zoogeographic distribution are provided]

Mironov, O. G. & T. L. Shchekaturina

1977. On the hydrocarbon composition of *Mytilus galloprovincialis* in the Black Sea. ZZ 56 (8): 1250 - 1256

[In the Black Sea, these mussels may be indicators of oil pollution inasmuch as they show a considerable uptake of hydrocarbons, including n-paraffins]

Naidenko, T. Kh. & N. I. Selin

1976. On the survival rate of young *Patinopecten yessoensis* on various types of substrates. EEMB, pp. 132 -134

[The accumulation of sand is a less favorable bottom for the settling and survival of this scallop than that of sand with an admixture of shells]

Naumov, A. D.

1977. The influence of rising temperatures on *Portlandia arctica* from two different populations in the White Sea. Biol. Morya, No. 2, pp. 74 - 77 (ES)

[Populations from conditions where the temperature is constantly below 0°C are less able to adjust to increased temperatures than those individuals from shallow water where summer temperatures rise to 2.5°C. These differences are not sufficient to regard the different populations as distinct physiological races]

Nistratova, S. N.

1976. The connection between the life cycle of mollusks and the sensitivity of cardiac muscle to acetylcholine. EEMB, pp. 135 - 136

[There is a correlation between the increase of sensitivity to acetylcholine and the maturation of the gonads]

Pryadko, V. P.

1976. Observations on calcium exchange in the tissues of *Anodonta cygnea* L. Dokl. AN SSSR B, No. 9, pp. 833 - 837 (ES)

[Calcium was found in all tissues, though differential concentration in the mantle was noted]

Rodionov, V. F., E. D. Pavlova & M. N. Zatravkin

1976. The mollusks of Lake Seliger. SPZM, pp. 133 - 134

[21 species of Unionidae and Sphaeriidae were found]

Saburov, E. G.

1976. Diurnal dynamics of the movement of the mantle fold in *Anodonta cygnea* in varying water conditions. Sravnit. issled. izmenenii fiziol. funktsii pod vliyaniem estestv. i sintetich. detergentov (A comparative study of the change of physiological function under the influence of natural and synthetic detergents). Yaroslavl', pp. 64 - 67

Savchuk, M. Ya.

1976. The acclimatization of *Mya arenaria* in the Black Sea. Biol. Morya, No. 6, pp. 40 - 46 (ES)

[First reported in 1966, *M. arenaria* has now generated a new biocenose in the Black Sea. In places it reaches a density of 2000 spm per m^2 and a biomass of 10 kg/m^2. Attaining a length of 92 mm, the species may become commercially important]

Shust, I. V., I. M. Kostinik & L. G. Kuz'movich

1976. Morphohistochemical characteristics of the sexual organs of *Anodonta piscinalis* Nilss. SPZM, pp. 170 - 172

Skarlato, O. A. & Ya. I. Starobogatov

1975. New data for constructing a system of Bivalvia. MN, Sb. 5, pp. 4 - 8

[Modifications are suggested for the improvement of the systematic scheme of the Bivalvia as proposed by Nevesskaya, Scarlato, Starobogatov and Eberzin in 1971]

Skul'ski, I. A.

1976. On the role of calcium in the adaptation of a marine mollusk to low environmental salinities. EEMB, pp. 165 - 166

[In *Mytilus edulis*, calcium is important for: the maintenance of isosmotic pressure, the creation of membrane potentials, the activity of certain enzymes, and the neutralization of negative charges in cells]

Sokolov, V. A.

1977. Cerebral influence on the visceral ganglia via the circumpallial nerve in *Unio pictorum* (Linn.). Vestn. Leningr. Univ., No. 9, pp. 85 - 88 (ES)

[This neurophysiological study shows how nerve impulses from the cerebral ganglia can reach and affect the visceral ganglia via the circumpallial nerve in addition to the more usual path via the cerebro-visceral connectives]

Starobogatov, Ya. I.

1977. Mollusca, Class Bivalvia [*in*] Opredelitel' presnovod. bespozvonochnyk Evrop. chasti SSSR (Handbook of the freshwater invertebrates of the European portions of the USSR). Plankton and Benthos. Gidrometeoizdat, Leningrad, pp. 123 - 151

[57 species in 4 families of bivalves are considered; brief ecological notes, distributional data, and synonymies are provided]

Tsikhon-Lukapina, E. A. & T. A. Lukasheva

1975. Feeding of the shipworm *Teredo navalis*. MN, Sb. 5, 140 - 142

[A résumé of laboratory experiments]

Varaksin, A. A.

1976. Neurosecretory activity of cerebropleural ganglionic neurons in the gametogenesis of the mussel *Crenomytilus grayanus*. EEMB, pp. 39 - 42

[The functional physiological condition of the nervous elements of the ganglia is closely correlated with the reproductive cycle]

1976. The neuroendocrine cycle and regulation of gametogenesis in the Bivalvia. EEMB, pp. 43 - 45

[*Crenomytilus grayanus* and *Patinopecten yessoensis* were examined morphologically, morphometrically, and electronmicroscopically. The physiological neuroendocrine activity depends on ecological factors – partly on the water temperature. The physiological mechanisms by means of which the ecological factors influence the condition of the neuroendocrine system are unclear]

1976. On the neurosecretions of the marine bivalves *Crenomytilus grayanus* (Dunkér) and *Patinopecten yessoensis* (Jay). Materialy VII mezhdunarod. simpoz. po neirosekretsii evolyuts. aspecty neiroendokrinal (Data of the 7th international symposium on neurosecretion in evolutionary neuroendocrinal aspects), Leningrad, p. 165

[A decrease of the average parameters of the nucleus and the body of neurons of the cerebropleural, visceral, and pedal ganglia was observed at the time of sexual inactivity. Ecological factors, which condition gametogenesis and spawning, are affected by the nervous

system. It is surmised that control over gametogenesis and spawning can be accomplished by neuroendocrines]

Vasil'eva, V. S.

1976. Seasonal changes in the heat resistance of the cells of the filtering epithelium of the ctenidia of *Crenomytilus grayanus*. EEMB, pp. 46 - 47

[The changes are not adaptations to the absolute temperature of the water; rather, they decline at the same time as the activity of the sexual and neurosecretory apparatus declines]

Vekilov, B. G., E. M. Asadullaev & S. K. Karyagdy

1976. Brackish water anthropogenic representatives of the genus *Didacna* Eichwald in Azerbaijan. VPS, Vyp. I, pp. 10-22

[A short survey of the group. A summary of published data together with personal investigations show the presence of 55 species of the genus in anthropogenic deposits. Stratigraphic analyses show the principal significance of the representatives of the genus]

Vigman, E. P.

1977. On the role of age structure in the maintenance of the stability of the glands [gonads] of *Crenomytilus grayanus* (Dunker). Dokl. AN SSSR 234 (5): 1222 - 1225

[A study of the production of larvae of this species indicates that a certain level of constancy may be maintained and that the species may be especially fit for aquaculture]

Zaiko, N. N.

1976. The dynamics of the chlorine content in the growth layers of marine bivalve shells in connection with the saline conditions of their habitats. EEMB, pp. 73 - 74

[Chlorine ions are incorporated into layers of the shell and the rate is correlated seasonally]

Zaiko, N. N., E. V. Krasnov & O. I. Nedava

1976. On the determination of the salinity of ancient marine bodies of water by study of the chemical content of molluscan shells. Biol. Morya, No. 6, pp. 61 - 63 (ES)

[In an examination of 11 shells of Recent and Neogene-Quaternary specimens of *Arctica islandica*, the method of Raker and Valentine, with modification proposed by Zakharov and Radostev, was shown to be satisfactory]

CEPHALOPODA

Barskov, I. S.

1975. Shell structure and the evolution of the ontogenesis of the cephalopods. MN, Sb. 5, pp. 171 - 173

[The development of a decidedly late embryonic shell coupled with the simultaneous appearance of 4 gills is an early evolutionary acquisition and possibly represents the most primitive state in cephalopod evolution. Bactrids and orthocerids (e.g., ammonites) have a comparable structure in the early portions of their straight shells, which apparently reflects their incomplete metamorphosis and veliger-like larvae]

Dursхits, V. V.

1976. The structure of the shell of ammonites and its ontogenetic stages revealed by electron microscopy. EEMB, pp. 57 - 60

[The investigation indicated that ammonites exhibit direct development]

Gaevskaya, A. V. & Ch. M. Nigmatullin

1976. Biotic relationships of *Ommastrephes bartrami* in the northern and southern parts of the Atlantic Ocean. ZZ 55 (12): 1800 - 1810 (ES)

[A helminthological investigation in which new representatives of didimozoid metacercaria are reported in *Ommastrephes*]

Krivoshapkina, V. S.

1976. On the ontogenesis of the suture line of *Zelandites*. DV BPI 38 (141): 72 - 78 (ES)

[In this, the first study of the change in the suture line of *Zelandites*, a close resemblance is noted to *Gaudryceras* and *Eogaudryceras* of the subfamily Gaudryceratinae, which supports Vidman's supposition that *Zelandites* was derived from *Eogaudryceras*]

Nesis, K. N.

1975. A comparison of the cephalopod fauna from both coasts of Central America. MN, Sb. 5, pp. 156 - 158

[The deep water faunas of the Eastern Pacific (EP) and the Inner American seas (IA = Caribbean Sea, Gulf of Mexico and adjacent bodies of water) have been isolated for not less than 10 to 15 million years and the surface, sublittoral faunas for not less than 4 to 5 million years. The number of benthic and oceanic species of both areas is quite similar while the nekto-benthic, bentho-pelagic and nerito-oceanic species in the EP are sharply impoverished in comparison with the IA. It is possible that the EP tropical fauna was reduced in the Pleistocene as a result of changes in the water currents]

1975. The ecological evolution of the cephalopods. MN, Sb. 5, pp. 152 - 155

[Recent cephalopods evolved along 3 basic lines: nektonic, nekto-benthic, and benthic. Evolution and specialization did not occur as a result of the widening or narrowing of the initial adaptive zone, but rather by transfer to different zones. Mainly, evolution took place on the tropical shelf in a struggle with other organisms such as fish, and, principally, organs of locomotion were subjected to the most intense selection pressure in attempting to secure this favorable, vital habitat]

1977. The biology of *Argonauta boettgeri* and *A. hians* in the Western Pacific and the Malay Archipelago. ZZ 56 (7): 1004-1014 (ES)

[The distribution and biology of both species are similar; *A. boettgeri* occurs mainly in the North Equatorial Current and its branches while *A. hians* is found around Flores, Banda and Halmahera. The males mature before their mantle reaches about 7 mm and die after the first mating. The females mature when the mantle is about 15 mm and they prolong the time of their growth and reproduction. The length of the mantle and the shell of the female are compared. It is hypothesized that incubation extends for 3 days, and that the female deposits some eggs in the shell and expels a group of larvae every night. The female is a specialized pelagic organism and feeds on pteropods and heteropods. Possibly they feed during the day in subsurface waters. At night, the female prefers to attach herself to living or non-living objects which float or drift on the surface, even to other females to form strings of argonauts. It is assumed that this is an adaptation to passive, nocturnal hovering on the surface at the time of oviposition and expulsion of the larvae]

Nesis, K. N.

1977. The horizontal and vertical distribution of oceanic cephalopods. 1. S'ezd sov. okeanologov, vyp 2, tezisy dokl. Moscow, Nauka (First session of soviet oceanologists, 2, thesis reports), pp. 126 - 127

[This is a summary of extensive data on the distribution and migration of oceanic cephalopods, especially in boreal and equatorial zones]

Nesis, K. N. & G. A. Shevtsov

1977. Neritic squid of the family Loliginidae in the waters of the Soviet Far East. Biol. Morya No. 3, pp. 70 - 71 (ES)

[A juvenile specimen of *Loligo (Doryteuthis) bleekeri* Keferstein was taken in the South Kurile Strait at 60 - 90 m where apparently it was astray in search of food. This is the first report of this species in Soviet waters]

Nigmatullin, Ch. M.

1976. The discovery of a gigantic specimen of *Architeuthis* in the equatorial Atlantic Ocean. Biol. Morya, No. 4, pp. 29 - 31 (ES)

[Possible reasons for the anomalous occurrence of *Architeuthis* outside its range are presented]

Shimansky, V. N.

1975. Changes in the cephalopod fauna at the Mesozoic-Cenozoic boundary. MN, Sb. 5, pp. 183 - 185

[At the end of the Mesozoic and the beginning of the Cenozoic, sharp changes are noted in the coleoid and ammonoid cephalopods, while nautiloids altered only slightly. The nautiloids acquired their present day appearance by the end of the Miocene]

Starobogatov, Ya. I.

1976. On the homology of the tentacular apparatus of cephalopod mollusks. Evol. Morphol. bespozvonoch. zhivot. (Evol. morphol. of invertebrates), Leningrad, pp. 50 - 51

[It is theorized that the tentacular apparatus of cephalopods is homologous to the lateral tentacles and their placement in the Monoplacophora]

Vovk, A. N., K. N. Nesis & B. G. Panfilov

1975. The distribution of the deep sea cephalopods in the south Atlantic and adjacent waters. MN, Sb. 5, pp. 162 - 164

[Apparently sperm whales feed on pre-spawning and spawning swarms of cephalopods. Such aggregations usually take place in waters of the continental slope, the submarine heights of the South Atlantic and near the Antarctic convergence]

Zakharov, Yu. D. & V. S. Krivoshapkina

1976. Features of growth and the continuity of shell formation in ammonoids. DVBPI 38 (141): 34 - 71 (ES)

[3 postembryonic stages were observed and a single whorl of the shell was shown to form in 1.3 -1.7 years]

SCAPHOPODA

Chistikov, S. D.

1975. Some problems of Scaphopod taxonomy. MN, Sb. 5, pp. 18 - 21

[A new system for the order Dentaliida is proposed: Superfamily Quasidentalioidea, new (1 family), Superfamily Dentalioidea (4 families) and Superfamily Rhabdoidea, new (3 families). Several new familial and subfamilial units are also established]

A. S. Z.

Tampa Meeting of the American Society of Zoologists and Society of Systematic Zoology

The American Society of Zoologists and the Society of Systematic Zoology will meet at the Holiday Inn Hotel and Convention Center in Tampa, Florida, December 27 to 30, 1979. Very low room rates are available ($19.- for single rooms and $24.- for doubles). The call for contributed papers will be issued in April and the deadline for abstracts is August 31.

Symposia are being arranged for the following topics:

- Cell Volume Regulation
- Physiology of the Avian Egg
- Immunological Memory
- Developmental Biology of Fishes
- Social Signals – Comparative and Endocrine Approaches
- Behavioral and Reproductive Biology of Sea Turtles
- Systematics – Ecology Interface
- Life History Strategies of Marine Organisms
- Applicability of Functional Morphology to the Construction of Classifications and Phylogenies
- Analysis of Form

An all-participant party, a reception and luncheon following the ASZ Presidential Address, and divisional cash bar socials will be arranged. Plans include Commercial Exhibits, a Job Placement Service, and a Babysitting Service.

For more information and abstract forms contact: Ms. Mary Wiley, Business Manager, American Society of Zoologists, Box 2739 California Lutheran College, Thousand Oaks, CA 91360 [telephone: (805) 492 4055]

W. S. M.

Symposium on the Life Histories of Mollusks

Papers on any aspect of molluscan life histories will be considered for presentation at a symposium to be held during the joint meeting of the Western Society of Malacologists and the American Malacological Union in Corpus Christi, Texas, 5 - 11 August 1979. Presentations